

# PRODUCT DATASHEET SubstiTUBE T8 EM Star 15 W/4000 K 1200 mm

SubstiTUBE® STAR | Economic LED tubes for electromagnetic control gears



#### Areas of application

- Corridors, stairways, parking garages
- Cooling and storage rooms
- Warehouses
- Domestic applications
- General illumination within ambient temperatures from -20...+45 °C

#### **Product benefits**

- High color homogeneity
- Energy savings of up to 68 % compared to conventional 1,500 mm T8 fluorescent lamp
- Instant flickerfree starting

#### **Product features**

- LED replacement for conventional compact fluorescent lamps for use in CCG luminaires or on AC mains
- T8 LED tube made of glass with G13 base
- Low flicker according to EU 2019-2020 (SVM  $\leq$  0,4 / PstLM  $\leq$  1)
- Mercury-free and RoHS compliant
- Single and tandem operation on conventional control gear (0.6 m version)
- Type of protection: IP20



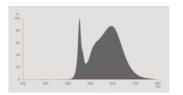
## **TECHNICAL DATA**

## Electrical data

Nominal wattage	15 W
Construction wattage	15.00 W
Nominal voltage	220240 V
Claimed equiv. conventional lamp power	36 W
Nominal current	75 mA
Type of current	AC
Operating frequency	50/60 Hz
Mains frequency	50/60 Hz
Max. lamp no. on circuit break. 10 A (B)	32
Max. lamp no. on circuit break. B10 A - CCG without compensation	48
Max. lamp no. on circuit break. B10 A - CCG with compensation	9
Max. lamp no. on circuit break. 16 A (B)	40
Max. lamp no. on circuit break. B16 A - CCG without compensation	60
Max. lamp no. on circuit break. B16 A - CCG with compensation	11
Power factor $\lambda$	> 0.90

## Photometrical data

Luminous flux	1800 lm
Luminous efficacy	120 lm/W
Lumen main.fact.at end of nom.life time	0.70
Light color (designation)	Cool White
Color temperature	4000 K
Color rendering index Ra	≥80
Light color	840
Standard deviation of color matching	≤5 sdcm
Rated LLMF at 6,000 h	0.80
Flickering metric (Pst LM)	1
Stroboscope effect metric (SVM)	0.4



# Light technical data

Beam angle	190 °
Warm-up time (60 %)	< 0.50 s
Starting time	< 0.5 s
Rated beam angle (half peak value)	190.00 °

# **Dimensions & Weight**

Overall length	1212.00 mm
Diameter	26.70 mm
Tube diameter	26,7 mm
Maximum diameter	27 mm
Product weight	190.00 g

# Temperatures & operating conditions

Ambient temperature range	-20+45 °C
Maximum temperature at tc test point	65 °C

# Lifespan

Nominal lamp life time	30000 h
Number of switching cycles	200000
Lumen maintenance at end of serv	0.70
Rated lamp survival factor at 6,000	≥ 0.90

# Additional product data

## PRODUCT DATASHEET

Mercury content	0.0 mg
Capabilities	

Dimmable	No

## **Certificates & Standards**

Energy efficiency class	E
Energy consumption	15.00 kWh/1000h
Type of protection	IP20
Standards	CE / EAC
Photobiological safety group acc. to EN62778	RGO

## **Country-specific categorizations**

	Order reference	LEDTUBE T8 EM S
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#### LOGISTICAL DATA

# Energy labellling regulation data acc EU 2019/2015

Lighting technology usedLEDNon-directional or directionalNDLSMains or non-mainsMLSLight source cap-type (or other electric interface)613Connected light source (CLS)NoColor-tuneable light sourceNoEnvelopeNoHigh luminance light sourceNoCorrelated colour temperature typeSINGLE_VALUECorrelated colour temperature typeSINGLE_VALUELighthick26.70 mmHeight36.70 mmKritch36.82Chromaticity coordinate x0.382Chromaticity coordinate y0.00Beam angleSPHERE_360		
Mains or non-mains     MLS       Light source cap-type (or other electric interface)     G13       Connected light source (CLS)     No       Color-tuneable light source     No       Envelope     No       High luminance light source     No       Correlated colour temperature type     SINGLE_VALUE       Claim of equivalent power     No       Height     26.70 mm       Width     26.70 mm       Chromaticity coordinate x     0.382       Chromaticity coordinate y     0.380	Lighting technology used	LED
Light source cap-type (or other electric interface)   G13     Connected light source (CLS)   No     Color-tuneable light source   No     Envelope   No     High luminance light source   No     Anti-glare shield   No     Correlated colour temperature type   SINGLE_VALUE     Claim of equivalent power   No     Length   1212.00 mm     Width   66.70 mm     Chromaticity coordinate x   0.382     Chromaticity coordinate y   0.380	Non-directional or directional	NDLS
Connected light source (CLS)NoColor-tuneable light sourceNoEnvelopeNoHigh luminance light sourceNoAnti-glare shieldNoCorrelated colour temperature typeSINGLE_VALUEClaim of equivalent powerNoLength212.00 mmHeight26.70 mmWidth0.382Chromaticity coordinate y0.380Chromaticity coordinate y0.00	Mains or non-mains	MLS
Color-tuneable light sourceNoEnvelopeNoHigh luminance light sourceNoAnti-glare shieldNoCorrelated colour temperature typeSINGLE_VALUEClain of equivalent powerNoLength1212.00 mmHeight26.70 mmWidth0.382Chromaticity coordinate x0.380R9 Colour rendering index0.00	Light source cap-type (or other electric interface)	G13
EnvelopeNoHigh luminance light sourceNoAnti-glare shieldNoCorrelated colour temperature typeSINGLE_VALUEClain of equivalent powerNoLength1212.00 mmHeight26.70 mmWidth26.70 mmChromaticity coordinate x0.382Chromaticity coordinate y0.380R9 Colour rendering index0.00	Connected light source (CLS)	No
High luminance light source   No     Anti-glare shield   No     Correlated colour temperature type   SINGLE_VALUE     Claim of equivalent power   No     Length   1212.00 mm     Height   26.70 mm     Vidth   26.70 mm     Chromaticity coordinate x   0.382     Chromaticity coordinate y   0.380     R9 Colour rendering index   0.00	Color-tuneable light source	No
Anti-glare shield   No     Correlated colour temperature type   SINGLE_VALUE     Claim of equivalent power   No     Length   1212.00 mm     Height   26.70 mm     Width   26.70 mm     Chromaticity coordinate x   0.382     R9 Colour rendering index   0.00	Envelope	No
Correlated colour temperature typeSINGLE_VALUEClaim of equivalent powerNoLength1212.00 mmHeight26.70 mmWidth26.70 mmChromaticity coordinate x0.382Chromaticity coordinate y0.380R9 Colour rendering index0.00	High luminance light source	No
Claim of equivalent powerNoLength1212.00 mmHeight26.70 mmWidth26.70 mmChromaticity coordinate x0.382Chromaticity coordinate y0.380R9 Colour rendering index0.00	Anti-glare shield	No
Length   1212.00 mm     Height   26.70 mm     Width   26.70 mm     Chromaticity coordinate x   0.382     Chromaticity coordinate y   0.380     R9 Colour rendering index   0.00	Correlated colour temperature type	SINGLE_VALUE
Height 26.70 mm   Width 26.70 mm   Chromaticity coordinate x 0.382   Chromaticity coordinate y 0.380   R9 Colour rendering index 0.00	Claim of equivalent power	No
Width 26.70 mm   Chromaticity coordinate x 0.382   Chromaticity coordinate y 0.380   R9 Colour rendering index 0.00	Length	1212.00 mm
Chromaticity coordinate x 0.382   Chromaticity coordinate y 0.380   R9 Colour rendering index 0.00	Height	26.70 mm
Chromaticity coordinate y 0.380   R9 Colour rendering index 0.00	Width	26.70 mm
R9 Colour rendering index 0.00	Chromaticity coordinate x	0.382
	Chromaticity coordinate y	0.380
Beam angle SPHERE_360	R9 Colour rendering index	0.00
	Beam angle	SPHERE_360

Survival factor	0.90
Displacement factor	0.90
LED light source replaces a fluorescent light source	yes
EPREL ID	563357
Model number	AC34992

## **EQUIPMENT / ACCESSORIES**

- Suitable for operation on magnetic control gear

#### Safety advice

- Operation in outdoor applications in suitable damp-proof luminaires possible according to data sheet and installation instruction.
- The Tc Point is located underneath the product label on the front side of the lamp.

#### **DOWNLOAD DATA**

	DOWNLOAD DATA
POF	User instruction SubstiTUBE STAR
PDF	Installation guide SubstiTUBE® T8 T5
PDF	Installation guide Installationsanleitung SubstiTUBE T8 T5

#### LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4058075594067	Sleeve 1	27 mm x 27 mm x 1,310 mm	267.00 g	0.95 dm <sup>3</sup>
4058075594074	Shipping box 8	1,355 mm x 184 mm x 130 mm	3733.00 g	32.41 dm³

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

## Legal advice

- When used to replace a T8 fluorescent lamp the total energy efficiency and light distribution depends on the design of the lighting system.

# DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.